ATV Safety

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Farm use of all-terrain vehicles (ATVs) has increased dramatically in the last few years. ATVs were originally designed for recreation. However, the mobility of ATVs and recent development of racks, PTOs, and drawbars, make them a useful tool on the farm. Though equipped for work, ATVs do not lose their recreational appeal.

Most ATV users, whether riding for work or pleasure, have little or no formal riding training and tend to think of ATVs as toys. On the contrary, ATVs are "rider active" vehicles, which means riders must master basic riding skills in order to ride them safely. When given the proper respect, ATVs can be a valuable work tool and provide considerable entertainment. Misuse however, can lead to serious injury or even death.

Safety

To insure safety, a rider should take several precautions before attempting to ride an ATV. First, read the owner's manual and become familiar with the ATV. Second, make a pre-ride inspection of the machine. Third, wear proper clothing and safety gear. Know basic safety rules and riding skills. Practice riding skills in an open area free of obstructions.

Pre-Ride Inspection

A pre-ride inspection insures that everything on the machine is adjusted and working properly to prevent a breakdown or even an accident. In a pre-ride inspection check tires and wheels, controls, lights and switches, oil and fuel, chain or drive shaft, and chassis. A general pre-ride checklist is provided in this publication, but riders should refer to the owner's manual for a more detailed checklist for their machine. ATVs should always be equipped with a complete tool kit supplied by the manufacturer.

Helmets and Eye Protection

Safety gear is a must for the ATV rider; the most important piece of safety equipment is the helmet. A rider should always wear a helmet that meets or exceeds safety standards. Purchase a helmet that is approved and marked by either the Department of Transportation (DOT), the American National Standards Institute, or the Snell Memorial Foundation. A helmet should fit snugly and always be securely fastened.

Riders should wear safety goggles to protect eyes whenever a helmet is not equipped with an appropriate face shield. Sunglasses are not safety goggles and do not provide adequate eye protection.

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Clothing

A well-equipped ATV rider always wears proper clothing, including gloves, boots, long pants, and a long sleeved shirt (Figure 1). Gloves prevent fatigue from vibration, scratches from brush, and protection from cold weather. Off-road type gloves, which have padding over the knuckles, offer the most protection.

Boots that rise above the ankles offer the most protection and support for ATV riders. Boots should have heels to prevent your feet from slipping off the footrests. Cowboy boots are better than tennis shoes, but lace-up work boots or motorcycle racing boots are the best footwear.

Long pants and long sleeved shirts prevent scratches from brush. Serious riders should wear off-road racing gear that has padded areas at the knees, elbows, and shoulders.

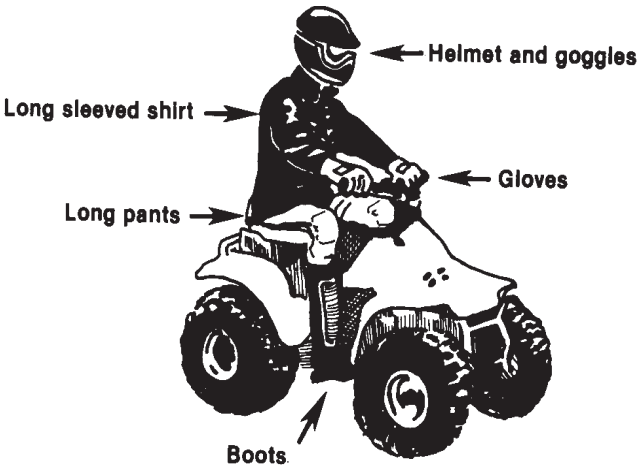

Figure 1. A well equipped ATV rider.

Basic Safety Rules

Once a rider has completed a pre-ride inspection and selected proper safety gear and clothing, there are some basic safety rules he or she should know and follow. These include keeping your feet on the footrests, riding single, and riding off-road only. Footrests are located just in front of the rear tires and putting a foot on the ground while riding could easily result in running over a foot or even pulling the rider from the machine. Because an ATV does not turn in the same manner as a motorcycle, a rider does not need to put a foot down while turning.

Though the seat on an ATV may seem large enough for two, it is designed to accommodate the operator only. The operator needs the entire seat to safely negotiate rough terrain. Approximately one third of all accidents occur when ATVs are ridden double. Carrying passengers also increases the weight on the ATV and makes it harder to maneuver.

ATVs are not licensed vehicles and are for off-road use only. Riding on hard surfaces, such as pavement or concrete, makes it more difficult to turn the ATV.

The balloon tires on ATVs that make them able to handle many different types of terrain also make them difficult to handle at times. The tires have a tendency to bounce when going across rough terrain and will hydroplane easily when crossing water at high speeds.

Another major cause of ATV accidents is failure to ride within there skills. Stay away from tough riding areas such as steep inclines and extremely rough terrain, until riding skills have developed. Riders younger than 16 years of age are more likely to have accidents, because they often feel they have mastered all riding skills after a short period of time. Experienced riders should always supervise riders within this age group until their riding skills have fully developed.

Figure 2. ATVs operating in state owned riding areas must have a 10' whip antenna with a bright red or orange flag.

Riding Skills

As stated earlier, ATVs are “rider active” vehicles and require some basic riding skills for safe operation. Riders must shift their weight in order to keep the ATV balanced while turning or riding on inclines.

Turning

Although some ATVs are equipped with a differential rear axle, most have a solid rear axle, which causes both wheels to rotate at the same speed. In this case, the inside tire on the turn must slip when the ATV is turning. To get the tire to slip, the rider shifts his weight to reduce load on the inside tire. The rider supports most of his weight on the outer footrest while leaning his upper body to the inside slightly. As speed increases the rider must lean his upper body even farther into the turn while still supporting his weight on the outer footrest. If the ATV starts to tip over, the rider should reduce his speed and shift his weight to the center of the machine.

Inclines

Climbing hills can be challenging and fun, but remember that some hills are simply too steep for riding abilities and that others are too steep for even an expert’s riding abilities. When climbing hills, approach the hill in low gear with enough speed to reach the top, but not so much to go too fast when reaching the crest. If unfamiliar with the riding area, slow down at the top and turn along the crest of the hill. Keep feet on the footrests and lean forward to keep weight on the front axle. When start losing speed, downshift quickly and smoothly to keep moving without raising the front wheel off the ground.

If there is not enough power to continue uphill, stop the ATV and set the parking brake. If you can, drag the rear of the machine around so that it is heading downhill. Remount and coast to the bottom of the hill using the rear brake to control speed. Do not try to back down or let ATV roll backwards downhill. If the ATV starts to roll backwards, apply the front brake. If this does not stop motion, jump free of the machine.

Recreation Use

Oklahoma is blessed with many different types of riding terrain ranging from the flat, wide open spaces of the panhandle to the mountain trails of the Southeastern portion of the state. The Oklahoma Tourism and Recreation Department currently maintains seven off-road riding areas in the state. Each of these areas has its own specific rules, but one universal rule is that all ATVs must have a 10 foot whip antenna displaying a bright orange or red flag (Figure 2).

ATVs are popular transportation to favorite hunting or fishing areas and are often used to carry a variety of supplies to these areas. When carrying supplies the ATV should be equipped with sufficient rack space. The rider should be free to operate the machine and not be required to carry or secure anything.

When transporting guns on ATVs, make sure they are unloaded and carried in a properly mounted scabbard. The gun should point toward the ground. When mounted sideways the gun can be hit by brush and could cause an accident.

Farm Use

ATVs serve a wide variety of uses on farms ranging from gathering livestock to transportation to remote areas. ATVs are often used to haul small loads and pull trailers. Sprayers can be mounted on them, equipped with either a hand gun or boom (Figure 3). Mowers to pull behind ATVs are also being marketed. Whatever the use, always consider ATV safety and follow extra safety precautions for specific tasks.

When gathering livestock, the rider often concentrates more on the animals than the terrain. Failure to watch changing terrain or look for unexpected obstacles can lead to a serious accident. Loose wire lying in a pasture, brush, or vines can pull feet from footrests, resulting in an injury. Tall grass in pastures can hide obstacles such as holes, stumps, or rocks from a rider’s view.

Figure 3. ATV equipped with a sprayer and boom.

When loading an ATV, try to keep the machine well balanced. Balancing an ATV often requires adding weight to the front of the machine to counterbalance loads on the rear. Also balance loads crosswise to keep the ATV from "pulling" to one side. Secure tools in a fashion that allows the rider to safely operate the machine.

Many ATVs are equipped with drawbars to pull trailers and are capable of pulling large loads. However, they are not designed with enough braking power to stop large loads. Riders should not pull more weight than their ATV can safely stop. There should also be a good balance between trailer and tongue weight (Figure 4). Excessive tongue weight can put too much weight on the rear axle, making the ATV difficult to maneuver. It can also cause the ATV to tip over backwards. Insufficient tongue weight can allow the trailer to try to lift the rear of the machine.

Mounting sprayers on ATVs can allow access to areas that may be too wet for regular equipment. ATV sprayers are also handy in brushy areas. Treat sprayers as a load on ATVs, and always counter balance them. Exercise caution due to shifting liquid in the tank which could cause the ATV to become off balance on turns.

Give proper respect to the chemical are using and follow all safety precautions on chemical labels. Clean the ATV thoroughly when the sprayer removed.

Figure 4. A properly loaded ATV trailer has a good balance between trailer load and tongue weight.

Summary

In essence, the key to ATV safety is the rider, and an ATV is only as safe as its rider. So, understand the machine and be aware of basic riding skills and safety rules before you start to ride.

Pre-Ride Checklist:

( ) TIRES: Always maintain proper pressure in the tires and be sure all tires are inflated to the same pressure. If the pressure in a tire is not the same as the tire opposite it, the ATV may be difficult to maneuver. ATVs have low pressure tires (usually 2 to 6 psi) and require a low pressure tire gauge, an automotive gauge will not work. Also check tires for cuts or gouges that could leak or cause a blowout.

( ) WHEELS: Make sure axle nuts are tight and secured with a cotter pin. Lug nuts should also be tight and none should be missing.

( ) BRAKES: Always make sure all brakes are working properly before riding. Check the cables and linkages to insure they are moving smoothly. The controls should be positioned so that they are easy to reach and use.

( ) THROTTLE: The throttle should operate smoothly and snap back to the idle position when released. Make sure that turning the handlebars from left to right has no effect on throttle operation. If it does adjustments should be made immediately. If the ATV has a throttle limiter make sure it is appropriately adjusted for the rider.

( ) LOOSE NUTS OR BOLTS: Riding on rough terrain may cause nuts and bolts to loosen. While the engine is off, check for loose nuts or bolts.

( ) FOOT SHIFTER: The foot shifter should be firmly attached and positioned in a way that shifting is comfortable. If the shifter is pointed toward the ground the foot is in a position where it could easily be caught and pulled to the ground, possibly causing an accident.

( ) LIGHTS AND SWITCHES: The ignition switch should be functioning properly before riding. The kill switch should be working properly because it could prevent an accident. All lights must be working when riding at night, but they also make riding during the day safer.

( ) OIL AND FUEL: While the engine is off, check the oil level. An engine cannot operate for long without oil. Always check fuel level before starting a long ride. Make sure that there are no fuel or oil leaks.

( ) CHAIN OR DRIVE SHAFT: Check the chain for proper adjustment (refer to owner's manual) and lubrication. Also check for improper wear. If the ATV has a drive shaft instead of a chain make sure it has the correct amount of oil and does not leak.

( ) TOOL KIT: Make sure ATV is equipped with complete tool kit, supplied by the manufacturer.

ATV RIDERS CODE:

- Know operators manual
- Check the ATV before riding
- Wear helmet
- Protect eyes and body
- Get qualified training
- Ride with others - never alone
- Ride within skills
- Don’t carry passengers
- Respect riding area rules
- Keep noise levels low
- Ride straight - no alcohol or drugs
- Preserve the environment
- Be courteous to other vehicles
- Lend ATV to skilled riders only
- Always supervise youngsters
- Have fun and be safe

Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Robert E. Whitson, Director of Cooperative Extension Service, Oklahoma State University, Stillwater, Oklahoma. This publication is printed and issued by Oklahoma State University as authorized by the Vice President, Dean, and Director of the Division of Agricultural Sciences and Natural Resources and has been prepared and distributed at a cost of 20 cents per copy. 0507

BAE-1228-4